PART-TIME EMPLOYMENT
AS A PREDICTOR OF GRADE POINT AVERAGE
FOR SECONDARY SCHOOL STUDENTS
IN AN URBAN SCHOOL DISTRICT

BY

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To

Walter G. Squires

Corine T. Squires

Parents

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TABLE OF CONTENTS

PAGE

ACKNOWLEDGEMENTS iv
ABSTRACT vii

CHAPTER

I INTRODUCTION, 1

The Problem 4
Delimitation and Limitations 4
Justification of the Study 5
Definition of Terms 8
Procedures 10
Organization of the Research Report 16

II CORRELATES OF ACADEMIC ACHIEVEMENT AMONG HIGH SCHOOL STUDENTS: A REVIEW OF THE RESEARCH 17

III PRESENTATION AND ANALYSIS OF DATA 30

Descriptive Data by Grade Level Relative to Students Involved In the Study 31
Correlation Matrices 37
The Results of Multiple Regression Analysis 47
Multiple Regression Data 49

IV SUMMARY, CONCLUSIONS AND DISCUSSION 55

Summary 55
Conclusions 62
Discussion 63

APPENDICES

A DUVAL COUNTY SCHOOL SYSTEM BIOGRAPHIC DATA FORM 68

B STUDENT INFORMATION QUESTIONNAIRE 69

C STUDENT DATA NEEDED FOR LISTINGS OF SAMPLE DATA BASE 71

REFERENCES 72
BIOGRAPHICAL SKETCH 75

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Given the paucity of research and policy implications relative to the impact of part-time employment on academic performance among secondary school students, the study of the impact of part-time employment on grade point averages, after accounting for the contributions of eight other variables known to affect grades, was undertaken. From the 34,340 students enrolled in grade 8-12 of an urban school district a grade-level stratified random sample was selected. Data were collected from district-maintained student records and from a student-completed instrument relative to 470 students' employment status, the selected other presumed independent variables, and 1981-82 grade point averages.

Two multiple regression analyses were run for each grade, one using whether or not the student was employed and the other the amount of employment. The form of the analysis was stepwise for all of the variables except employment status which was entered last.

Since in only three instances did the part-time employment make a significant contribution to the variations in grade point averages (accounting for 1.1% and 1.2% of 68.7% total variance and 2.2% of 52.5% total variance), it was concluded that its impact was minimal. Consistent with previous research, previous grades, academic aptitude scores, and school attendance consistently accounted for most of the variance in grade point averages.

CHAPTER I
INTRODUCTION

There can be found two schools of thought on part-time employment for secondary school students. Teen-age students in junior and senior high school who work part-time jobs are thought by some educators to be adversely affected academically because of part-time work (Cole, 1980, p.44). That is, part-time work has an adverse effect on the grade point average (GPA) of working students. This school of thought also holds that the requirement for students to work part-time while attending school precludes their participation in many school related activities. It is reasoned that involvement in cocurricular activities is an integral part of the school years' development and that the "values orientation" from such participation is lost for students working while attending school (Williams, 1967, p. 36; Young, 1980, D-3).

The followers of the opposing school of thought hold concepts likely to be expressed as follows: "Part-time employment for students serves to keep them off the streets and out of trouble." "It helps them to raise their standard of living, and learn the value of a dollar."

"Part-time employment prepares young people to become working members of society." "Part-time employment contributes to the reduction of unemployment in general and to an increase in the gross national product in particular." A 6-city survey by the National Manpower Institute indicated that 68% of the employers surveyed were firmly in favor of youth work experience and the survey cited such benefits of working as developing maturity, self-identity, self-reliance, preparing for future career direction, establishing good working relationships, and enjoying the stimulation of working with competent professionals (Delaney, 1975, VI-14).

Relative to the stance of parents and teachers on the matter of part-time employment for high school youth, it can be argued that the concurrence of parents is expressed when they sign the appropriate forms to enable their children to secure work permits. The researcher, in preparation for the research reported herein, talked informally with a number of teachers about the issue and found a wide variation of opinion with several teachers supporting the notion of part-time employment and other teachers equally strong in their opposition to part-time employment. The division of opinion tended to center around whether or not it impacted on their school activity both in terms of academic performance and the ability to participate in extra-curricular activities.

Some situations make it necessary for teen-age students to work part-time. Low family income, divorce, death of the principal wage earner in the family, unanticipated need to include the student in the family work force, or abandonment by one or both parents may force the teen-age student to fend for himself or herself financially. Socioeconomic and peer pressure to participate in activities that require a substantial outlay of funds mandate part-time work by some students. Some teen-age students work part-time jobs when it is a matter of convenience to acquire luxury items. Furthermore, government and individually-sponsored student employment programs, which have been instituted in an effort to combat students dropping from school, have encouraged students to work during part of the school day or outside classroom hours (Delaney, 1975; Dykeman, 1979, p. 365; Heyneman, 1977; Levine, 1979). The conclusion drawn by the researcher, based on available information, was that apparently administrators and counselors involved in such programs had not considered the possibility that the part-time employment could have an adverse influence on student academic performance; or, the assumption was made by these school officials that the benefits from gainful part-time employment out-weighed any possible adverse academic effects.

A basic conflict can be seen in the two points of view on part-time employment for secondary school students. Therefore, the study reported herein focused on the relationships that might exist between academic achievement as reflected in grade point averages and part-time employment by students.

The Problem

The problem in the study was to determine for students in each grade level, grades 8 through 12, in a single urban school district the relative impact of part-time employment upon their 1981-82 grade point average (GPA) after the contributions of sex, ethnic group, socioeconomic status (SES), school attendance, GPA for previous school year (1980-81), self-perceptions of intelligence, extracurricular activity participation, and Stanford Achievement Test Battery (SAT) overall percentile score were taken into account.

Delimitation and Limitations

The potential participants in the study were 34,340 students who were enrolled in grades 8 through 12 of the Duval County, Florida, School System in the school year 1981-82. From this population, at each grade level a random sample of 120 students was selected for inclusion in the study.

Data in regard to 1981-82 GPA, school attendance, sex, ethnic group, SAT score, SES, and 1980-81 GPA were obtained from the Duval County School Board SIMS computer data base and student cumulative record files. All data were verified with the student permanent record files maintained at the school that the student was attending.

The data source for information pertaining to hours worked, extracurricular activity participation, self-perception of intelligence, and participation in free or reduced lunch program was a researcher-designed student information questionnaire. Complete useable data were obtained from 106 eighth grade students, 90 ninth grade students, 92 tenth grade students, 90 eleventh grade students, and 92 twelfth grade students.

Multiple regression was used to determine the contributions of the independent variables to the dependent variable. In entering the variables in the multiple regression equation, the part-time employment variable was entered last in order that the impact of this variable over and beyond that of the other independent variables could be determined. The other independent variables were entered in stepwise fashion.

To the extent that these data sources were inaccurate or incomplete the study lacked validity. However, this inaccuracy was guarded against in that each data sheet was cross-checked against the cumulative folder by the researcher. Furthermore, since the study was confined to the students in a single urban school district for a specified year, the results over and beyond this population had to be regarded as suggestive rather than conclusive. That is, the data were applicable to only one school district at one point in time.

Justification for the Study

Some school administrators, parents, guidance counselors, and politicians advocate the expenditure of vast sums of money for programs that encourage students to work for a variety of reasons (Crawford & Miskel, 1978; Delaney, 1975; Dykeman, 1979; Heffez, 1979; Heyneman, 1977; Watkins & Corder, 1977). Research studies dealing specifically with student employment effects on academic achievement are very limited. The results of the studies that could be found dealing with student employment were contradictory and of limited generalizability. Most were performed using very small sample size. Most were from rather limited populations (i.e., one or two schools).

School administrators have been influenced by the Department of Labor since 1970-71 to increase the participation in the Work Experience and Career Exploration Program (WECEP) and other vocational programs in order to retain dropout prone students within the school system (Dykeman, 1979, p. 363; Shively & Watts, 1980; Skallerud, 1979). The researcher had personal knowledge of the fact that classroom teachers were expected to alter or modify their lesson plans to allow cooperative training programs students to leave class early and be spared regular homework assignments. Homeroom programs, flag observances, and announcements were routinely preempted by the vocational education students being dismissed early to catch the bus to work at two district-operated skill centers.

As has been noted, there were few research studies dealing specifically with a relationship between student employment and academic achievement. Over 1400 items were found in ERIC and other sources under the subject "academic achievement"; of that number, only 120 were concerned with grades 7 through 12. Of those studies found, only two studies focused directly upon grade point average and part-time employment. These were the Gade and Peterson (1980) and Hammond (1970) studies. The results were conflicting. In the Gade and Peterson study no significant association between employment status and academic achievement was found. In the Hammond (1970) study there was evidence that the level of achievement might be significantly lower among the employed students than among the unemployed.

Millions of dollars are being spent on various vocational education programs, cooperative work programs, student unemployment surveys, and businesses′ employment of students at below the minimum wage, because they work less than 40 hours per week. All these programs are operating on the basic assumption and widespread opinion that "school youth need work." They are not founded on continuing or widespread results of scholarly research.

The study reported herein does not provide a definitive answer to the question, "Should students work or not work?" It does, however, add to available knowledge of a relationship between students working part-time and their grade point averages. It was reasoned that if the findings indicated there was no meaningful relationship between students working part-time and academic achievement, it would help alleviate the concerns of some educators about the possibility of an adverse impact of working part-time on academic achievement. If there was a meaningful adverse relationship between students working part-time and academic achievement, administrators should discourage student work programs. Therefore, the study was seen as relevant to administrators who make decisions on matters concerning part-time employment policies and practices for students.

Definitions of Terms

Employment. The performance of some duty, service, or obligation of time, and availability of a person for another that results in payment is employment, a job for money. Various studies have used different criteria (e.g., "over 5 hours per week," or "at least 12 hours per week"); in the study, any work for pay outside of class on a continuing basis was considered employment. Part-time jobs of an independent contractor nature such as newspaper routes were estimated to the number of hours per week performed. Babysitting jobs were approximated to the nearest hour per week on the average considering the school year.

Ethnic group. The classification system of the Duval County, Florida, school system whereby each student assigns himself or herself to one of the following groups was used: white non-Hispanic, black non-Hispanic, Hispanic, American Indian or Alaskan Native, and Asian or Pacific Islander.

Extracurricular activity. A student´s response to a global question about extra curricular activity participation contained in a researcher-designed instrument was used.

The terms used elsewhere in referenced materials, "cocurricular activities," and "third curriculum activities" were interpreted in this study to be synonymous with extracurricular activities.

Grade point average (GPA). The GPA is the numerical average of letter grades awarded at the end of a school year. In determining the average an A = 4 points, B = 3, C = 2, D = 1, and E = 0, or failure to earn credit for the course of study. (This was consistent with district policy for the years in question in that advance placement classes did not carry additional weight.) In this study, grades for all subjects in which the students were enrolled for credit were used in determining 1980-81 GPA and the 1981-82 GPA.

School attendance. The number of days of attendance in school for the year as recorded in the student permanent record file was used to indicate attendance.

Self-perception of intelligence (SPIN) The SPIN was the student´s response to a global question about intelligence contained in a researcher-designed instrument.

Socioeconomic status (SES). A dichotomous classification based on whether or not the student participated in the free lunch or reduced price lunch specially funded program was used. Participation in free lunch or reduced price lunch program resulted in a "Yes" classification. No participation in the free lunch or reduced price lunch program was a "No" classification. A "Yes" classification was considered low socioeconomic status. A "No" classification was considered a high socioeconomic status.

Stanford Achievement Test Battery (SAT). The most recent SAT score held by the Duval County School System was used. When English, Reading, and Mathematics portions were combined a single overall score was derived. The overall percentile score recorded in a student's cumulative record file was used in the study as the measure of scholastic ability.

Procedures

The procedures used to conduct the study are described in the paragraphs that follow. These are organized by study design, sample selection, instrumentation, data collection, and data treatment.

Study Design

The study was a survey type of ex post facto study. A stratified random sample of junior and senior high school (grades 8 through 12) students entered in the data base by their completion of Duval County School System Biographic Data Form (Appendix A) was selected from the listing for the 1981-82 school year by the Duval County Student Information Management System (SIMS) computer from the population of each grade 8 through 12 students for 1981-82. A survey, using a researcher-designed instrument (Appendix B), was made of selected students to determine whether or not they held a part-time job during the 1981-82 school year. If they did work a part-time job, the number of hours worked and other relevant data were requested. The grade point averages of the selected students as well as the other required biographic information were obtained from the Cumulative Record Folders and the computer maintained data base (Appendix C).

The data were analyzed by grade level using multiple regression to determine the contribution of part-time employment and amount of part-time employment to grade point average over and beyond the contributions made by other independent variables that previous research had indicated contributed to grades.

Sample Selection and Final Sample

The 34,340 students who were enrolled in grades 8 through 12 in the 1981-82 school year in the school system of Duval County, Florida, junior and senior high schools were the population from which the student participants in the study were selected. The basic procedure for selecting the participants was by a stratified random method. Specifically, for each grade, grades 8 through 12, the Duval County SIMS computer program was used to generate a 2% random sample of students which resulted in a minimum of 120 students randomly selected at each grade level. This allowed for a minimum of 10 students for each of the independent variables in the multiple regression equation and gave a safety factor of 33 1/3% to cover loss of students who moved, or in some other fashion were not available for data collection. The one-third turnover approximation was based on observed rates of turnover in the classrooms during the past four years. The turnover on a county-wide basis for the year was estimated at nearly 40% by the school superintendent (Pope, 1982, p. B-1).

As a result of the selection procedure, complete useable data were obtained from 106 eighth grade students, 90 ninth grade students, 92 tenth grade students, 90 eleventh grade students, and 92 twelfth grade students.

Instrumentation and Data Collection

The Duval County School System Biographical Data Form (Appendix A), which was used to gather data for the Student Information Management System (SIMS), was a basic source of information for this study. The SIMS was established for the purpose of obtaining and storing in the computer pertinent information concerning the Duval County student population. A major goal of the system was to afford quick access to student information while reducing the reports and data collection burdens on school-based personnel (Roberson, 1980, p. 20). Information provided by this source was identification of the students to be included in the study, their sex, grade level, school attended, and ethnic grouping.

The student information questionnaire (Appendix B) was the principal instrument used to obtain the other information needed, including data which was not yet stored in SIMS such as attendance, whether or not student worked part-time, if so, how many hours were worked per week, self-perception of intelligence, and verification of participation in free lunch/reduced price lunch program. As previously indicated, the student information questionnaire was developed by the researcher whose concern was to ask the questions necessary to deal with the focus of the study. After its initial development, the instrument was administered to a group of approximately 30 Duval County School System students included in the population but not in the random sample. The instrument was then revised based on their responses. Thus, it was believed that the instrument was valid for the purpose used. The student permanent record file and cumulative record file were the source documents for SIMS. They were considered to take precedence should conflicting data appear in any other sources.

The consolidating instrument that was used to combine the information from all sources to establish the data base for performing the multiple regression operations is shown as Appendix C.

Data Coding and Treatment

Each bit of data was coded in a form that was usable in the multiple regression analysis. Specifically, the coding of each of the variables was as follows:

The 1981-82 grade point average (GPA) was coded in a two digit number between 0.0 and 4.0 representing $\hat{y}$, the dependent variable.

The number of days of school attendance was represented by total days present out of 180 days during the 1981-82 school year as predictor variable x_1.

The sex of the student was represented by (1) for male (2) for female as predicator variable x_2.

Extracurricular school-sponsored activity involvement in athletic teams, band, or clubs was coded (1) to indicate the student was involved in one or more athletic teams, band or clubs, (0) to mean not involved in any school sponsored athletic teams, band, or clubs. This was predictor variable x_3.

Ethnic group membership was coded with same code used by SIMS: (1) white non-Hispanic, (2) black non-Hispanic, (3) Hispanic, (4) American Indian or Alaskan Native, (5) Asian or Pacific Islander. Ethnic group membership was predictor variable x_4.

The socioeconomic status (SES) was coded as (1) for participation in the specially funded programs for socioeconomically deprived students, (0) for nonparticipation in any of the specially funded programs. The SES was predictor variable x_5.

The most recent composite, or overall SAT percentile score was entered as a two digit number as predictor variable x_6.

The student´s self-perception of his/her intelligence (SPIN) was coded (1) to indicate a perception of intelligence as below average intelligence, (2) a self-perception of average intelligence, (3) a self-perception of above average intelligence. The SPIN was predictor variable x_7.

Each student´s grade point average for the previous school year (1980-81) was coded as a two digit number between 0.0 and 4.0 as predictor variable x_8.

For the first regression analysis, whether or not the student worked at all during school year 1981-82 (employment status 1982 yes/no) was coded as (0) for not working during the school year and (1) to indicate that student worked during the school year. This is hereafter referred to as Model I analysis. In the second analysis, the amount of time worked (employment status 1982 category) was coded using a single digit number from one - eight to indicate the categories of hours worked based on the category scale shown as a part of Appendix B. This is hereafter referred to as Model II analysis. This was predicator variable x_9.

The slope of correlation between the predictor variable and the dependent variable was coded "b" as is standard practice in solving the multiple regression equations.

The above coded variables were incorporated into a multiple regression equation (Roscoe, 1974, p. 362; Belanger & Boyle, 1980), that was performed for each grade level 8 through 12. As noted, multiple regression equation analyses were performed for each grade level sample. As indicated, the first analysis, Model I, was with the part-time employment treated as (1) employed or (0) not employed part-time; in the second analysis, Model II, the part-time employment was coded and treated in terms of amount ranging from zero employment to 35 plus hours per week.

The form of the multiple regression equation

$$(\hat{y} = b_1x_1 + b_2x_2 + b_3x_3 + b_4x_4 + b_5x_5 + b_6x_6 + b_7x_7 + b_8x_8 + b_9x_9)$$

is such that one can determine if the mere presence of part-time employment and the amount of part-time employment can be related to grade point average. In order to do this, all the independent variables save the part-time employment (variable x_9 in each instance) were entered in stepwise fashion. Then, the part-time employment variable (whether 1 or 0 to represent part-time employment, or the category of part-time employment to represent amount of employment) was entered last. This enabled a determination to be made of the amount of contribution to the dependent variable of grade point average made by the employment variable after the contribution of the other variables has been taken into account.

Organization of the Research Report

The remainder of the study is organized into three chapters. The second chapter is a review of related literature and research. The third chapter contains the presentation and analysis of data. The fourth chapter includes the summary, conclusions, and discussion.

CHAPTER II

CORRELATES OF ACADEMIC ACHIEVEMENT AMONG HIGH SCHOOL STUDENTS: A REVIEW OF THE RESEARCH

Two points of view about part-time work for high school youth were found in the literature along with copious reasoning for each point of view. The scholarly research to support either point of view was limited. However, there had been numerous studies of factors related to academic achievement among high school students. In order that the reader may have a framework for interpreting the data and an understanding of why it is necessary to take into account the impact of variables in addition to part-time employment on the academic achievement of students, the review presented herein, over and beyond the two studies relating to part-time employment and academic achievement, is confined to a synthesis of the research showing the relationship of variables to academic achievement. This research in regard to other variables provided the basis on which selections were made about the other independent variables that needed to be taken into account before determining the contribution of part-time employment.

Before turning directly to the other variables, it seems appropriate to deal first with the two studies which related part-time employment and academic achievement.

Gade and Peterson (1980) and Hammond (1970) focused on the relationship of school related behavior, and other variables affecting academic achievement, to work experience and academic achievement. Gade and Peterson (1980) found that there was no significant association between employment status and academic achievement. Their research sample consisted of 351 10th grade students enrolled in 2 urban high schools located in the upper midwestern part of the United States. The determination of achievement was based on grades received in the last two semesters in four basic subjects. Working students were designated as those employed 12 or more hours per week. The study sought to examine the relationship of student work experience to five factors: (a) gender, (b) academic achievement, (c) extracurricular involvement, (d) socioeconomic status (SES), and (e) self-esteem. "Students who are employed seem to perform as well or better [when identified] on [the basis of] these indicators than non-working students" (Gade & Peterson, 1980, p. 69). The limitation of the sample to 10th grade students may somewhat limit generalization downward to the junior high school students and upward to the 12th grade students.

Hammond (1970) found that the level of academic achievement was significantly lower among employed 12th grade students than among the unemployed. The rapidity of changes in behavior and personality in the teen years may produce considerably different results in lower and higher grades. A predictor variable of the grade level of the student would help identify this effect.

A need for categorization of the origins of influences on student achievement has been indicated by research.

> In attainment models where individual student achievement is at issue, individual student attributes, other nonschool inputs to schooling, and school inputs must be measured at the individual level to avoid misleading results. (Bidwell & Kasarda, 1980, p. 426)

Variables Related to the Background of the Students

There has been considerable research undertaken that focused on selected variables related to the background of students in relation to academic achievement. Sex, socioeconomic status (SES), standardized measures of academic ability (i.e., intelligence tests), and/or standardized measures of academic achievement (e.g., SAT) have been taken into account as background variables.

Finn, Dulberg, and Reis (1979) found in cross-national studies of educational attainment that the influence or interrelationship of the sex of the student, the teacher, and/or their interactions may be dependent on the national culture. More specifically the need to keep cultural sex discrimination in mind in drawing conclusions from sex based data was expressed as follows: "The explicit relationship of sex-segregated schooling to the attainments of boys and girls makes this issue especially worthy of exploration" (Finn, Dulberg, & Reis, 1979, p. 494). They concluded that any study of educational attainment in terms of school attendance, literacy, academic performance, or preparation for gainful employment would reveal that the patterns for men and women differ markedly according to the nationality under consideration. These differences cannot be divorced from the process of schooling itself.

> Opportunity to learn is one of the significant correlates of pupil achievement. Opportunity, as defined in these studies, refers to the degree of exposure to the course material and the required skills. . . . Many of the data reported in this summary suggest that inferior performance in either sex is due in part to the inadequacy of time and experience provided by instructional practices. (Finn, Dulberg, & Reis, 1979, p.497)

Because of its frequent consideration, inclusion of the gender variable in the study reported herein seemed reasonable. However, based on the results of Finn, Dulberg, and Reis (1979), the sex variable could have minimal influence in a population of one school district in the United States.

The socioeconomic status (SES) of the student is also typically considered to be a major influence on academic achievement. One of the studies that contributed a different point of view was done in Puerto Rico by Ronald L. Nuttall in 1967-68. The model involved two levels of achievement, two levels of sex, and five levels of socioeconomic status. The sample size was reduced by screening criteria from 2,500 to 800 seniors and some juniors in the largest public high school. In terms of family background there were no statistically significant interactions. This study indicated that the same factors were important for academic achievement for both boys and girls and for students from all socioeconomic status levels. Students who were doing well academically desired, and were working to attain higher status occupations than those who were not doing well academically. The lower achieving students expected and desired a lower level occupation. These effects held across socioeconomic status levels. The importance of these background factors to academic achievement was explained as follows:

> Personality traits associated with academic success did differ somewhat by sex and socioeconomic background. Low achieving boys as contrasted to high achieving boys and to both high and low achieving girls, were markedly less intelligent. A similar pattern existed for the traits of conscientiousness where again the low achieving boys were markedly deficient in conscientiousness. These low scores for intelligence and conscientiousness held at all socioeconomic levels. (Nuttall, 1972, p. 83)

The positive relationship between the educational expectations of the adolescent and the socioeconomic status (SES) of his/her family has been consistently replicated. The students from the "better family" expected to achieve more and go farther than "poor folks." However, family expectations and adoption of those values by the student are inconsistent. Rehberg, Schafer, and Sinclair (1970) found that ambition, personal educational expectations, and measured intelligence so overshadow socioeconomic stratification that achievement predictions based predominately on SES alone would not be valid. Mobility attitudes were more strongly associated with stratification of destination than with stratification of origin (p. 46). Poor youth may work part-time and rich youth may work part-time. But neither of these categories has been shown to be an exclusively significant determinant of academic achievement.

In light of the studies that have been done in regard to the variables of sex, socioeconomic class, and measures of ability, it is obvious that there are some conflicts. However, since there seemed to be some indication that these may be influential, it was decided to include all three of these variables in the study reported herein. For convenience, given the high relationship between "intelligence" and "achievement," instead of using a measure labelled intelligence to portray scholastic ability, the Stanford Achievement Test was used. (It was available in the students´ records.)

Variables Related to Students´ Self-perceptions

Huge quantities of resources are being invested in work-study programs from eighth grade through high school (Dykeman, 1979). How helpful is the work-study program for the 14 and 15 year old junior high school student who is already undergoing "identity confusion," a reflection of a general redefinition of self, of others, and of the world which takes place in the early adolescent (Bailey & Bailey, 1974, p. 210)? The self-perceptions held by the student of how intelligent the student felt himself/herself to be were found to be very important by Nuttall (1972).

> The single most important trait related to academic performance was found to be intelligence both actual and self-perceived. . . . The school should routinely monitor or how intelligent the child thinks he/she is. (Nuttall, 1972, p. 87)

Self-perceptions of scholastic ability were found related to academic achievement in studies by Bailey and

Bailey (1974) who confirmed Nuttall´s (1972) finding. Using 341 students from different grade levels, Bailey and Bailey (1974) found a shift in self-perceptions of scholastic ability--from low at eighth grade to high at 12th grade. At the 8th grade level, the males overrated their actual ability, while females tended to underrate their actual ability. The 12th grade students seemed to have the most realistic view of their ability. High school students not only revealed the most stable self-perceptions of the groups studied, but the most realistic self-views (p.211).

The relationship among home background, school achievement, and adolescent values (defined more broadly than self-perceptions of intelligence and including values related to work, satisfaction, self-worth, and morality) was studied by Kobett (1979). Here again, overall grade point average was used as a measure of school success. One of the strongest conclusions resulting was that "there is no evident relationship between adolescent values and school achievement" (p. 162).

The interests of students as they relate to both working part-time and academic achievement were central to the work of Gill (1980) who said, "What students are most and least interested in is certainly a significant variable in the educational process" (p. 160). More specifically, the interest of the student in school, peace, love, life, and the opposite sex may be very significant (Gill, 1980, p. 162).

Research such as that cited provides support for the notion that students´ self-perceptions of intelligence versus measured intelligence are legitimate points to consider in a study of the relationship of part-time work to academic achievement. Measures of adolescent values orientation seemed to have no relation to academic achievement. Even though interests and related value system may be related to academic achievement, since the study reported herein was based primarily on records, it was assumed that the attributes were randomly distributed in the population.

Other Relevant Variables

Student attitudes toward school and work, teacher sex and student sex interactions, and extent of participation in extracurricular school activities have been examined as relevant variables.

In a survey of 1248 high school students in North and Central Georgia, their attitudes and their future in the world of work were probed. Their attitudes about the need for freedom and independence in their future work and their feelings concerning certain conditions under which they would want to work, as well as their philosophy in general, were sampled and analyzed. Their attitudes, as shown by the correlation of their perception of the need for achievement in the classroom and success on the job, were not deemed to be very positive. "These students were, perhaps, recalling some historical examples of this discrepancy: U.S. Grant, Wagner, Edison, Churchhill, von Braun, etc." (Schab, 1979, p. 603).

The influence of the teacher and the interactions of some teacher characteristics and some student characteristics have been researched. Is the gender of the teacher, that is interacting with boys or girls, a significant factor to include in the influence of work on academic achievement? Teacher´s sex and student´s sex interactions were studied by the Thomas L. Good Center for Research in Social Behavior. The differing levels of achievement in the classroom of boys and girls in junior high school classes were investigated in two male and two female teacher´s classes. Three-way analysis of variance was made using teacher sex, student sex, and subject matter. "Inspection of the variables involved confirmed the conclusion that sex bias [of the teacher] was not a factor affecting teacher-student interactions in these classrooms" (Good et al. 1973, p. 78). Sex differences were found in classroom interaction patterns to be mostly due to student sex and not the sex of the teacher. Teachers were found to be primarily reactive in their teacher role to the different interactive practices that boys and girls present to the teacher. The teacher´s role, as the adult in charge of the class, and not the teacher´s sex was found to be the most significant factor. The sex of the student was significant. The quality of classroom life, as reflected in achievement, for high-achieving boys was found to be vastly different from the experience that low-achieving boys had. The difference between high and low girls was found to be much less than the difference between high and low boys (Good et al. 1973, p. 85-86).

The relevance of students´ participation in school activities as an influence on working and academic achievement has been viewed by some as significant in determining the quality of high school student life (Yarworth & Gauthier, 1978, p. 336). The related argument holds that high levels of participation in the "third curriculum" (i.e., cocurricular activities) are associated with high academic achievement. The alternative, inability to participate in the "third curriculum" because of working, has been assumed by some authors to result in lowered academic achievement (Williams, 1967; Young, 1980).

The "normal" participation of students in school activities was tentatively established and measured by Joseph S. Yarworth and William J. Gauthier, Jr. (1978) in a study of 459 high school students drawn from five Pennsylvania high schools. The relationship between various aspects of student self-concept and student participation in the extra and cocurricular activity programs of several Pennsylvania high schools was explored. It combined psychological with personal variables in its examination of student participation in the extra and cocurricular activity programs, both athletic and non-athletic. Some findings of the study were as follows:

> Not only was there a difference in the self-concept scores of high-and-low-frequency participators, but this difference is significant for all categories of student activities. Large numbers of students do not participate in the extra and cocurricular activities of the school. The study established the importance of self-concept in the relationship between academic achievement and participation not only in athletics but in non-athletic activities and the school activity program as a whole. The study dispelled the myth that school activities appeal equally to every student and that school activities are used by large numbers of students to complete the high school experience. (Yarworth & Gauthier, 1978, p. 342)

Greater participation in school activities might relate to academic high achievers in some ways (Yarworth & Gauthier, 1978, p. 335). Furthermore, "the lack of participation in school activities is a significant characteristic of the dropout" (Bell, 1967, p. 251). Participation in cocurricular activities cannot be inferred to be a causative or a regulatory agent for high academic achievement (Yarworth & Gauthier, 1978).

The attitudes of students toward work or academic achievement are recognized as being influential. A survey of students´ attitudes was beyond the scope of the study reported herein. However, in addition to the previously noted sex variable a variable relative to extracurricular school activities was used.

The possibility of the confounding effects of chronological sequence, interval, span of consideration, and year group (or generation) comparison was researched by Ferguson and Maxey (1978), who studied the trends in the academic performance of high school and college students. They found a substantial increase in the grades awarded by high school and college faculty over a 10-year period, 1966-1976. The ACT test scores for college freshmen were concurrently on the decline. They concluded that academic achievement improvement, as measured by grade point average differential over time, may show gains based on relaxing of harsh grading standards rather than factors that would be relevant if a shorter interval of comparison was used (Ferguson & Maxey, 1978, p. 509).

Other factors affecting academic achievement of students have been grouped by Charles E. Bidwell and John D. Kasarda (1980). They noted:

> In short, in attainment models where individual student achievement is at issue, individual student attributes, other nonschool inputs to schooling, and school inputs must be measured at the individual level to avoid misleading results. (p. 426)

The influence of both "schooling," the process through which instruction occurs, a structure of actions by students and teachers, and "school," the organization that conducts instruction and distributes school resources to individual students, are recognized as having recently been shown to have significant influence on academic achievement of individuals (Bidwell & Kasarda, 1980, p. 404).

To control the possible source of error of shifting grade point averages over time owing to a possible relaxing of grading standards, the study reported herein was kept to the minimum possible span of years. For example, data from all included grade levels was taken for the same consecutive calendar year time periods, as compared to stretching the study over a 10-year period. The relationship of the rather global concepts of "school" and "schooling" to academic achievement was considered too complex to introduce at this early stage of research relative to academic achievement and part-time employment.

CHAPTER III
PRESENTATION AND ANALYSIS OF DATA

As repeatedly noted, concern as to the influence of students' part-time work on schooling has been expressed in many newspapers, magazines, and professional journals. Little research has been directed toward this concern. The 34,340 students who were enrolled in grades 8 through 12 (junior and senior high school) in the Duval County School System for the 1981-82 school year constituted the target population for the study of the relationship between employment status and academic achievement among students in an urban school district. A grade level stratified random sample of students was selected from this population. Using a researcher-designed instrument and the permanent record files of the school district, the needed data regarding the independent variables and dependent variable were collected. Complete usable data were obtained from 106 eighth grade students, 90 ninth grade students, 92 tenth grade students, 90 eleventh grade students, and 92 twelfth grade students. Presented in the present chapter are descriptive data by grade relative to students involved in the study, correlation matrices, and the results of the multiple regression analysis of the data.

Descriptive Data by Grade Level Relative to Students Involved In the Study

Table 1 contains descriptive data in regard to the dependent variable and presumed independent variables about the students by grade level. More specifically, contained in Table 1 are data about the 1981-82 grade point average (GPA-82) i.e., the dependent variable: days present 1981-82, sex, participation in extracurricular activities, ethnic group, participation in a program for the socio-economically deprived student (SES), Stanford Achievement Test (SAT), self-perception of intelligence (SPIN), grade point average 1980-81 (GPA-81), employment status (Model I-worked yes/no 1981-82), and employment status (Model II-category of hours worked) which were the presumed independent variables.

As can be seen from the table, the GPA-82 of students ranged from a low of 1.9728 for grade 10 students to a high of 2.6967 for grade 12 students, within a range of 0 to 4.0 for grade 8 students to a range of .7 to 4.0 for grade 12 students. Days present in 1981-82 ranged from 91 to 180 days for grade 10 students to 148 to 180 days for grade 9 students. The range of mean attendances for all grade levels was 164.6222 to 169.2222 days. The sample according to sex varied from 60% female and 40% male for grade 11 students to 50% male and 50% female in grade 12.

Table 1. Descriptive Data by Grade Level for Students Involved In The Study

Variable			Grade Level		
	8	9	10	11	12
	n=106	n=90	n=92	n=90	n=92
GPA-82 ($\hat{y}$) Range	0-4.0	.3-4.0	.2-4.0	.5-4.0	.7-4.0
Mean	2.0311	2.1722	1.9728	2.1911	2.6967
Standard Deviation	.9425	.8465	.8581	.7255	.7152
Days Present 1981-82, (x_1) Range	99-180	148-180	91-180	106-180	139-180
Mean	165.9716	169.2222	166.8587	164.6222	166.2609
Standard Deviation	20.4657	12.8726	13.4406	14.5892	9.7607
Sex (x_2)					
Male	50 (46%)	46 (49%)	44 (48%)	36 (40%)	46 (50%)
Female	56 (54%)	54 (51%)	48 (52%)	54 (60%)	46 (50%)
Extracurricular Activities (x_3)					
Yes	67 (63%)	63 (70%)	48 (52%)	46 (51%)	63 (69%)
No	39 (37%)	27 (30%)	44 (48%)	44 (49%)	29 (31%)
Ethnic Group (x_4)					
white, Non-Hispanic	67 (63%)	55 (61%)	59 (64%)	66 (74%)	62 (67%)
black, Non-Hispanic	38 (36%)	32 (36%)	31 (34%)	21 (23%)	29 (32%)
Hispanic	0	1 (1%)	1 (1%)	1 (1%)	1 (1%)
American Indian/Alaskan Native	1 (1%)	0	0	0	
Asian/Pacific Islander	0	2 (2%)	1 (1%)	2 (2%)	
Participation in Program for Socioeconomically Deprived (SES) (x_5)					
Yes	27 (25%)	25 (28%)	16 (17%)	10 (11%)	12 (13%)
No	79 (75%)	65 (72%)	76 (83%)	80 (89%)	70 (87%)
SAT Scores (x_6), Range	0-98	0-94	4-99	9-97	6-98
Mean	53.5110	46.5444	51.8913	55.9111	57.5000
Standard Deviation	25.6256	27.3763	23.9598	21.0418	24.5041
Self-perception of intelligence (x_7), Range	1-3*	1-3*	1-3*	1-3*	1-3*
Mean	2.2547	2.2444	2.1630	2.2111	2.3152
Standard Deviation	.5175	.5041	.4753	.4369	.4901
GPA-81 (x_8)	0-4.0	.1-4.0	0-3.9	.6-4.0	.7-4.0
Mean	2.2287	2.0911	2.0586	2.1711	2.4826
Standard Deviation	1.0260	.8069	.9260	.7020	.7129
Employment Status (x_9)					
Model I Yes	27 (25%)	19 (21%)	25 (27%)	33 (37%)	59 (64%)
Model I No	79 (75%)	71 (79%)	67 (73%)	56 (63%)	33 (36%)
Model II, category of hrs. worked					
Not Employed · (0)	79 (75%)	71 (79%)	67 (73%)	56 (63%)	33 (36%)
1-4 hours per week (5)	5 (5%)	7 (8%)	5 (6%)	4 (4.5%)	3 (3%)
5-9 hours per week (6)	11 (10%)	5 (6%)	3 (3%)	1 (1%)	4 (4%)
10-14 hours per week (7)	5 (5%)	1 (1%)	9 (10%)	3 (3%)	1 (1%)
15-19 hours per week (8)	3 (2%)	2 (2%)	1 (1%)	8 (8%)	18 (20%)
20-24 hours per week (9)	1 (1%)	1 (1%)	4 (4%)	8 (8%)	11 (12%)
25-29 hours per week (10)	1 (1%)	1 (1%)	1 (1%)	4 (4%)	6 (7%)
30-34 hours per week (11)	1 (1%)	- -	1 (1%)	4 (4%)	5 (5%)
35 + hours per week (12)	0	2 (2%)	1 (1%)	2 (2%)	11 12%)

*1 means below average, 2 means average, 3 means above average

The highest participation in extracurricular activities was found to be in grade 9 students with 70% participation in one or more extracurricular activities. The lowest level of participation was for grade 11 students with 51% participation in extracurricular activities.

All ethnic groups were represented, although not in each grade level. Hispanics were not included in the grade 8 group. However, a single American Indian/Alaskan Native was included in grade 8.

The indicator of lower socioeconomic status, participation in reduced price or free lunch program, showed highest participation in grades 8 and 9 with 25% and 28% respectively. Grades 10, 11, and 12 had participation rates of 17%, 11%, and 13% respectively.

The average SAT percentile scores for the stratified samples were 53.5000 for grade 8, 46.5444 for grade 9, 51.8913 for grade 10, 55.9111 for grade 11, and 57.5000 for grade 12 students. Only grade 9 students fell below the national norm.

Students self-perception of intelligence was scaled as 1 of below average intelligence, 2 of average intelligence, and 3 of above average intelligence. The grade level mean scores of 2.2547 for grade 8 students, 2.2444 for grade 9 students, 2.1630 for grade 10 students, 2.2111 for grade 11 students, and 2.3152 for grade 12 students show that the grade level groups of students perceived themselves generally to be slightly above average intelligence. When the SAT scores are compared to self-perception of intelligence, except for grade 9, this opinion cannot be contested.

Grade point average 1980-81 (GPA-81) had a range from 0.0 to 4.0. The means were 2.2287 for grade 8 students, 2.0911 for grade 9 students, 2.0586 for grade 10 students, 2.1711 for grade 11 students, and 2.4826 for grade 12 students. These means show the academic achievement level for their previous school year to be slightly above for all grade groups.

The data about Model I employment status (a dichotomous yes/no response) indicated that 25% of grade 8 students worked more than one-half of school year 1981-82, 21% of grade 9 students worked more than one-half of school year 1981-82, 27% of grade 10 students worked more than one-half of school year 1981-82, 37% of grade 11 students worked more than one-half of school year 1981-82, and 64% of grade 12 students worked more than one-half of school year 1981-82. Model II (the number of hours worked each week by students) showed that of those students who worked in grade 8, 10% worked 5 - 9 hours per week and only 1% worked as much as 30 - 34 hours per week. The greatest percent (8%) of grade 9 students who worked, worked, only 1 - 4 hours per week; 5% worked 5 - 9 hours per week, 2% worked 15 - 19 hours per week, 1% worked 20 - 24 hours per week, 1% worked 30 - 34 hours per week, and 2% worked 35 or more hours per week. The proportion of grade 10 students who worked 1 - 4 hours per week was 6%, 5 - 9 hours per week was 3%, 10 - 14 hours per week was 10%, 15 - 19 hours per week was 1%, 20 - 24 hours per week was 4%, 25 - 29 hours per week was 1%, 30 - 34 hours per week was 1%, and 35 or more hours per week was 1%. Four grade 11 students (4%) worked 1 - 4 hours per week, 1 student worked 5 - 9 hours per week, 3 students (3%) worked 10 - 14 hours per week, 8 students (8%) were found in each category of 15 - 19 hours per week and 20 - 24 hours per week, 4 students, (4%) worked in each category 25 - 29 hours per week and 30 - 34 hours per week, and 2 students (2%) worked more than 35 hours per week. Grade 12 had the highest overall percentage of students who worked part-time --64%. Thus, 36% of the grade 12 students did not work part-time. Three percent of the grade 12 students worked part-time for 1 - 4 hours per week for more than one-half of the school year, 4% worked 5 - 9 hours per week, 1% worked 10 - 14 hours per week, 20% worked 15 - 19 hours per week, 12% worked 20 - 24 hours per week, 7% worked 25 - 29 hours per week, 5% worked 30 - 34 hours per week, and 12% worked part-time 35 or more hours per week.

Summarizing Model II (categories of hours worked per week), grade 8 students ranged from 1 - 4 hours per week through 30 - 34 hours per week, with a mean of less than 4 hours per week. Grade 9 students had the same range with a mean of less than 4 hours per week. Grade 10 students ranged from 1 - 4 hours per week through 35 hours or more with a mean of less than 4 hours per week. Grade 11 had the same range and a group mean below 4 hours per week. Grade 12 students also had the same range with the group mean being between 4 and 5 hours per week of part-time employment. The percentage of students who did work were working sufficiently longer hours per week to raise the mean for the entire group to more than 4 hours per week.

Correlation Matrices

In order for the reader to have a better understanding of the impact of the several presumed independent variables on the presumed dependent variable, in this section the correlation matrices among the independent variables and between each of the independent variables and the presumed dependent variable are presented. By analyzing these correlations between the several variables the reader can understand the amount of "overlap" among the variables. If the correlations are high the different variables are measuring somewhat the same thing; if they are low then different things are being measured. Ideally, when dealing with predictor variables in regression analysis low correlations are desired.

In Tables 2 through 11 the correlations within each grade level are identical except as they involve the employment status (x_9), of Model I or Model II and the dependent variable (y). The negative values of some correlations are readily seen herein but are not so apparent when observing the multiple regression data. The greatest negative correlation (-.3113) in grade 8 independent variables occurred between ethnic group and Stanford Achievement Test (SAT) percentile scores. The greatest positive independent, variable correlation (.5907) occurred between SAT percentile scores and previous grade point average (GPA-81).

Table 2. Correlation Matrix for Eighth Grade Group, Model I

Variables		x_1	x_2	x_3	x_4	x_5	x_6	x_7	x_8	9	$\hat{y}$
Days Present 1982	x_1	1.0000	-.0972	-.0193	-.1765	-.0279	.2313	.1266	.2717	-.1416	.4007
Sex	x_2		1.0000	.0011	.1398	-.0643	-.0530	-.0544	.0888	-.1512	.0197
Extracurricular Activities	x_3			1.0000	.0855	-.1826	.0633	.0735	.1211	.0419	.1442
Ethnic Group	x_4				1.0000	.2443	-.3113	.1044	-.1215	-.1584	.0545
Socioeconomic Status (SES)	x_5					1.0000	-.1889	.0892	-.2698	.0558	-.2202
SAT Percentile Score	x_6						1.0000	.3515	.5907	.0098	.5504
Self-perceived Intelligence	x_7							1.0000	.2694	-.1629	.4014
GPA 1981	x_8								1.0000	-.1882	.7813
Employment Status 1982 Model I yes/no	x_9									1.0000	-.2248
GPA 1982	$\hat{y}$										1.0000

Table 3. Correlation Matrix for Eighth Grade Group, Model II

Variables		x_1	x_2	x_3	x_4	x_5	x_6	x_7	x_8	9	$\hat{y}$
Days Present 1982	x_1	1.0000	-.0972	.0193	-.1765	-.0279	.2313	.1266	.2717	-.1690	.4007
Sex	x_2		1.0000	.0011	.1397	-.0643	-.0530	-.0544	.0888	-.1148	.0197
Extracurricular Activities	x_3			1.0000	.0855	.1826	.0633	.0735	.1211	.0340	.1442
Ethnic Group	x_4				1.0000	.2443	.3112	.1044	-.1215	-.1535	-.0545
Socioeconomic Status	x_5					1.0000	-.1888	.0892	-.2698	.0444	-.2202
SAT Percentile Score	x_6						1.0000	.3515	.5907	.0207	.5504
Self-perceived Intelligence	x_7							1.0000	.2694	-.1700	.4014
GPA 1981	x_8								1.0000	-.1871	.7813
Employment Status 1982 Model II Category	x_9									1.0000	-.2142
GPA 1982	$\hat{y}$										1.0000

Table 4. Correlation Matrix for Ninth Grade Group, Model I

Variables		x_1	x_2	x_3	x_4	x_5	x_6	x_7	x_8	9	$\hat{y}$
Days Present 1982	x_1	1.0000	.0500	.1061	.1416	.0675	.0872	.1958	.4813	-.1280	.4156
Sex	x_2		1.0000	.0388	.1071	.0839	-.1339	-.0108	.0806	-.0931	.1103
Extracurricular Activities	x_3			1.0000	.1852	.0963	-.1116	.3675	.1256	.0416	.1483
Ethnic Group	x_4				1.0000	.3633	-.1257	-.0080	-.0003	-.1807	.0299
Socioeconomic Status	x_5					1.0000	-.1784	.0804	-.1487	.0307	-.0808
SAT Percentile Score	x_6						1.0000	.1758	.5500	.0647	.4944
Self-perceived Intelligence	x_7							1.0000	.3202	.0193	.3188
GPA 1981	x_8								1.0000	.0498	.7801
Employment Status 1982 Model I yes/no	x_9									1.0000	.0235
GPA 1982	$\hat{y}$										1.0000

Table 5. Correlation Matrix for Ninth Grade Group, Model II

Variables		x_1	x_2	x_3	x_4	x_5	x_6	x_7	x_8	9	$\hat{y}$
Days Present 1982	x_1	1.0000	.0500	.1060	.1416	.0675	.0872	.1958	.4813	-.1553	.4155
Sex	x_2		1.0000	.0388	.1071	.0839	-.1339	-.0108	.0806	-.0960	.1103
Extracurricular Activities	x_3			1.0000	.1851	.0963	-.1116	.3675	.1256	-.0137	.1483
Ethnic Group	x_4				1.0000	.3632	-.1257	-.0080	.0391	-.1825	.0299
Socioeconomic Status	x_5					1.0000	-.1784	.0804	-.1487	-.0396	-.0808
SAT Percentile Score	x_6						1.0000	.1758	.5500	.0931	.4944
Self-perceived Intelligence	x_7							1.0000	.3202	-.0444	.3188
GPA 1981	x_8								1.0000	.0307	.7801
Employment Status 1982 Model II Category	x_9									1.0000	.0358
GPA 1982	$\hat{y}$										1.0000

Table 6. Correlation Matrix for Tenth Grade Group, Model I

Variables		x_1	x_2	x_3	x_4	x_5	x_6	x_7	x_8	9	$\hat{y}$
Days Present 1982	x_1	1.0000	.0819	.0534	.1706	.0928	.1132	.0793	.1576	.0210	.3143
Sex	x_2		1.0000	-.1514	-.0560	-.1048	.0756	-.1075	.0722	-.3044	.0413
Extracurricular Activities	x_3			1.0000	.0076	.0374	.1554	.1921	.1673	.1935	.1709
Ethnic Group	x_4				1.0000	.5388	-.4856	-.0688	-.2156	-.0306	-.0982
Socioeconomic Status	x_5					1.0000	-.4588	-.1582	-.2720	.0420	-.2172
SAT Percentile Score	x_6						1.0000	.2602	.5996	-.0495	.6197
Self-perceived Intelligence	x_7							1.0000	.3200	.1511	.4312
GPA 1981	x_8								1.0000	-.0628	.73131
Employment Status 1982 Model I yes/no	x_9									1.0000	-.1179
GPA 1982	$\hat{y}$										1.0000

Table 7. Correlation Matrix for Tenth Grade Group, Model II

Variables		x_1	x_2	x_3	x_4	x_5	x_6	x_7	x_8	9	$\hat{y}$
Days Present 1982	x_1	1.0000	.0819	.0534	.1706	.0928	.1132	.0793	.1576	.0157	.3143
Sex	x_2		1.0000	-.1514	.0559	-.1047	.0756	-.1075	.0722	-.2889	.0413
Extracurricular Activities	x_3			1.0000	.0075	.0374	.1554	.1921	.1673	.1888	.1709
Ethnic Group	x_4				.0000	.5388	-.4856	-.0688	-.2156	.0372	-.0982
Socioeconomic Status	x_5					1.0000	-.4588	-.1583	-.2721	.1185	-.2172
SAT Percentile Score	x_6						1.0000	.2602	.5996	-.1216	.6197
Self-perceived Intelligence	x_7							1.0000	.3200	.1088	.4313
GPA 1981	x_8								1.0000	-.1599	.7313
Employment Status 1982 Model II Category	x_9									1.0000	-.1930
GPA 1982	$\hat{y}$										1.0000

Table 8. Correlation Matrix for Eleventh Grade Group, Model I

Variables		x_1	x_2	x_3	x_4	x_5	x_6	x_7	x_8	9	$\hat{y}$
Days Present 1982	x_1	1.0000	.0525	.1553	.2260	.1700	.0030	.0896	.1350	-.2088	.2973
Sex	x_2		1.0000	-.0635	-.0759	-.0722	.0642	-.0313	.1377	.0187	.0383
Extracurricular Activities	x_3			1.0000	.0668	-.0786	.1764	.1683	.1410	.0285	.1481
Ethnic Group	x_4				1.0000	.3723	-.0283	.1588	.0443	-.2463	.0617
Socioeconomic Status	x_5					1.0000	-.2198	-.0904	-.0816	-.1296	.0485
SAT Percentile Score	x_6						1.0000	.5777	.5990	.1304	.4696
Self-perceived Intelligence	x_7							1.0000	.3497	.0094	.2151
GPA 1981	x_8								1.0000	.0224	.6553
Employment Status 1982 Model I yes/no	x_9									1.0000	-.1492
GPA 1982	$\hat{y}$										1.0000

Table 9. Correlation Matrix for Eleventh Grade Group, Model II

Variables		x_1	x_2	x_3	x_4	x_5	x_6	x_7	x_8	9	$\hat{y}$
Days Present 1982	x_1	1.0000	.0525	.1553	.2260	.1700	.0030	-.0896	.1350	-.2415	.2973
Sex	x_2		1.0000	-.0635	-.0759	-.0721	.0642	-.0313	.1377	.0452	.0383
Extracurricular Activities	x_3			1.0000	.0668	-.0786	.1764	.1683	.1410	.0323	.1481
Ethnic Group	x_4				1.0000	.3723	-.0283	.1588	.0443	-.2522	.0617
Socioeconomic Status	x_5					1.0000	-.2198	-.0904	-.0815	-.1338	.0484
SAT Percentile Score	x_6						1.0000	.5777	.5990	.0636	.4696
Self-perceived Intelligence	x_7							1.0000	.3498	-.0915	.2151
GPA 1981	x_8								1.0000	-.0328	.6553
Employment Status Model II Category	x_9									1.0000	-.1632
GPA 1982	$\hat{y}$										1.0000

Table 10. Correlation Matrix for Twelfth Grade Group, Model I

Variables		x_1	x_2	x_3	x_4	x_5	x_6	x_7	x_8	9	$\hat{y}$
Days Present 1982	x_1	1.0000	-.1097	.3098	.04729	-.0636	.2639	.1848	.2603	-.1153	.3492
Sex	x_2		1.0000	.0945	-.0220	-.1291	-.0232	-.1115	.1318	.0680	.0688
Extracurricular Activities	x_3			1.0000	.0685	-.0945	.4080	.3308	.3536	.0471	.3157
Ethnic Group	x_4				1.0000	.3883	-.4563	.0103	-.2186	-.3607	-.1975
Socioeconomic Status	x_5					1.0000	-.3086	.0144	-.0224	-.2487	-.0663
SAT Percentile Score	x_6						1.0000	.4269	.4497	.1520	.5583
Self-perceived Intelligence	x_7							1.0000	.4216	-.0743	.4419
GPA 1981	x_8								1.0000	-.0120	.6365
Employment Status 1982 Model I yes/no	x_9									1.0000	-.0735
GPA 1982	$\hat{y}$										1.0000

Table 11. Correlation Matrix for Twelfth Grade Group, Model II

Variables		x_1	x_2	x_3	x_4	x_5	x_6	x_7	x_8	9	$\hat{y}$
Days Present 1982	x_1	1.0000	-.1097	.3097	.0473	-.0636	.2639	.1848	.2603	-.0823	.3493
Sex	x_2		1.0000	.0945	-.0220	-.1291	-.0232	-.1115	.1318	.0094	.0688
Extracurricular Activities	x_3			1.0000	.0685	-.0945	.4080	.3308	.3536	.0873	.3158
Ethnic Group	x_4				1.0000	.3883	-.4563	.0103	-.2186	-.3249	-.1975
Socioeconomic Status	x_5					1.0000	-.3086	-.0144	-.0224	-.2917	-.0662
SAT Percentile Score	x_6						1.0000	.4268	.4496	.1745	.5583
Self-perceived Intelligence	x_7							1.0000	.4216	-.0190	.4419
GPA 1981	x_8								1.0000	.0093	.6365
Employment Status 1982 Model II yes/no	x_9									1.0000	-.0289
GPA 1982	$\hat{y}$										1.0000

These data hold true for both the Model I and Model II tables. The greatest negative correlation for grade 8 students between an independent variable and the dependent variable (GPA-82) occurred between Model I employment status and GPA-82 with a correlation of -.2248. The greatest positive correlation for grade 8 students between independent variables and the dependent variable (GPA-82) occurred between GPA-81 and GPA-82 with a positive correlation of .7813. As shown in Table 3, when categories of employment status (Model II) were incorporated into the matrix, relationships between ethnic group and SAT scores and between SAT scores and GPA-81 held constant; SES replaced employment status as the most negative relationship with the dependent variable. Whether or not these relationships are significant at the .05 level in the multiple regression data is determined by the F ratios established from consideration of all variables interacting among themselves and the sample size.

It must be noted that 1982 employment status, whether Model I or Model II, had a negative correlation with GPA-82, except for the grade 9 students. The correlation being most negative (-.2248) was for Model I employment status for the grade 8 students and least negative (-.0289) was Model II employment status for the grade 12 students.

The Results of Multiple Regression Analysis

The reader will recall the basic focus of the study was to determine the relative impact of employment status on students´ grade point average when the other variables which are normally considered to contribute to academic achievement have been taken into account. In order to accomplish this purpose a regression analysis was used. In the regression analysis used the variables, with the exception of employment status, were permitted by the computer program to enter into the regression analysis in the order in which they made a contribution to the variation in the presumed dependent variable, i.e., grade point average. Once all these had been entered, employment status was entered to determine the extent to which it made a contribution over and above the contributions made by the other independent variables utilized in this study. The results of the multiple regression analysis for each of the grade levels using both whether the student worked or not and the number of hours worked, i.e., Model I and Model II, are presented in Tables 12 through 16.

In Tables 12 through 16 the variables are listed in order of their contribution to GPA-82 (the dependent variable - $\hat{y}$). The contributory relationship of employment in the equation is portrayed as an individual line of data. That is, Model I and Model II employment status should be interpreted from the tables as separate and not as cumulative variables.

Only in grades 10 and 11 did employment status make a significant contribution at the .05 level to the variation in grades (GPA-82). Model I and Model II had a significant relationship for grade 10 students. Only Model I had a

Table 12 Multiple Regression Data for Eighth Grade Students

Variables	x_n	Multiple R Correlation	R^2 proportion of variance in dependent variable accounted for by variables	R^2 Change	Cumulative R^2	Stand. Error of Estimate
Grade Point Average 1981	x_8	.7813	.6104 *	.6104	.6104	.5910
Self-perceived Intelligence	x_7	.8006	.6498 *	.0614	.6498	.5631
Days Present 1982	x_1	.8270	.6839 *	.0341	.6839	.5376
Socioeconomic Status	x_5	8286	.6866	.0025	.6866	.5379
Ethnic Group	x_4	.8304	.6896	.0030	.6896	.5380
SAT Percentile Score	x_6	.8330	.6940	.0026	.6940	.5369
Extracurricular Activity	x_3	.8338	.6953	.0013	.6953	.5385
Sex	x_2	.8340	.6956	.0013	.6956	.5410
Employment Status 1982 Mod. I	x_9	.8351	.6975	.0019	.6975	.5420
Employment Status 1982 Mod.II	x_9	.8344	.6963	.0007	.6963	.5413

* Variables remaining when those contributing at less than the .05 level have been removed.

Table 13 Multiple Regression Data for Ninth Grade Students

Variables	x_n	Multiple R Correlation	R^2 proportion of variance in dependent variable accounted for by variables	R^2 Change	Cumulative R^2	Stand. Error of Estimate
Grade Point Average 1981	x_8	.7801	.6086 *	.6086	.6086	.5326
SAT Percentile Score	x_6	.7840	.6147	.0061	.6147	.5314
Self-perceived Intelligence	x_7	.7874	.6200	.0053	.6200	.5309
Sex	x_2	.7903	.6247	.0047	.6247	.5306
Days Present 1982	x_1	.7930	.6290	.0043	.6390	.5307
Extracurricular Activity	x_3	7945	.6313	.0023	.6313	.5322
Socioeconomic Status	x_5	.7947	.6317	.0004	.6317	.5352
Ethnic Group	x_4	.7948	.6318	.0001	.6318	.5384
Employment Status 1982 Mod. I	x_9	.7949	.6319	.0001	.6319	.5416
Employment Status 1982 Mod.II	x_9	.7952	.6324	.0006	.6324	.5413

*Variable remaining when those contributing less than the .05 level have been removed.

Table 14 Multiple Regression Data for Tenth Grade Students

Variables	x_n	Multiple R Correlation	R^2 proportion of variance in dependent variable accounted for by variables	R^2 Change	Cumulative R^2	Stand. Error of Estimate
Grade Point Average 1981	x_8	.7312	.5347 *	.5347	.5347	.5886
SAT Percentile Scores	x_6	.7655	.5860 *	.0513	.5860	.5583
Days Present 1982	x_1	.7903	.6246 *	.0386	.6246	.5347
Self-perceived Intelligence	x_7	.8111	.6580 *	.0254	.6580	.5133
Ethnic Group	x_4	.8218	.6755 *	.0175	.6755	.5029
Extracurricular Activity	x_3	.8219	.6756 **	.0000	.6756	.5057
Sex	x_2	.8219	.6756 **	.0000	.6756	.5087
Socioeconomic Status	x_5	.8219	.6756 **	.0000	.6756	.5118
Employment Status 1982 Mod. I	x_9	.8287	.6868 *	.0112	.6868	.5059
Employment Status 1982 Mod.II	x_9	.8290	.6884 *	.0128	.6884	.5047

* Variables remaining after those contributing at less than the .05 level have been removed.

** Carried to the fifth place Extracurricular Activity, Sex and Socioeconomic Status accounted for only .00001 R^2 change.

Table 15 Multiple Regression Data for Eleventh Grade Students

Variables	x_n	Multiple R Correlation	R^2 proportion of variance in dependent variable accounted for by variables	R^2 Change	Cumulative R^2	Stand. Error of Estimate
Grade Point Average 1981	x_8	.6552	.4294 *	.4294	.4294	.5518
Days Present 1982	x_1	.6883	.4738 *	.0444	.4738	.5523
SAT Percentile Scores	x_6	6983	.4877 *	.0139	.4877	.5283
Socioeconomic Status	x_5	.7041	.4958	.0081	.4958	.5272
Self-perceived Intelligence	x_7	.7061	.4986	.0028	.4986	.5289
Sex	x_2	.7082	.5016	.0030	.5016	.5304
Ethnic Group	x_4	.7090	.5028	.0002	.5028	.5330
Extracurricular Activity	x_3	.7093	.5032	.0004	.5032	.5360
Employment Status 1982 Mod. I	x_9	.7248	.5253 *	.0221	.5253	.5272
Employment Status 1982 Mod.II	x_9	.7187	.5165	.0133	.5165	.5321

* Variables remaining after those contributing at less than the .05 level have been removed

Table 16 Multiple Regression Data for Twelfth Grade Students

Variables	x_n	Multiple R Correlation	R^2 proportion of variance in dependent variable accounted for by variable	R^2 Change	Cumulative R^2	Stand. Error of Estimate
Grade Point Average	x_8	.6364	.4051 *	.4051	.4051	.5547
SAT Percentile Scores	x_6	.7056	.4980 *	.0849	.4980	.5124
Days Present 1982	x_1	.7195	.5177 *	.0197	.5177	.5050
Self-perceived Intelligence	x_7	.7266	.5279	.0123	.5279	.5025
Sex	x_2	.7283	.5304	.0025	.5304	.5041
Socioeconomic Status	x_5	.7300	.5328	.0003	.5328	.5058
Extracurricular Activity	x_3	.7312	.5347	.0019	.5347	.5078
Ethnic Group	x_4	.7314	.5349	.0002	.5349	.5106
Employment Status 1982 Mod. I	x_9	.7359	.5415	.0076	.5415	.5101
Employment Status 1982 Mod.II	x_9	.7333	.5378	.0029	.5378	.5122

*Variables remaining after those contributing at less than the .05 level have been removed.

significant relationship for grade 11 students. In grades, 8, 9 and 12 neither Models I or II employment status made a significant contribution to the variation in GPA-82. Grade Point Average 1981 (GPA-81) was significant at all grade levels accounting for .4051 of the GPA-82 variance at twelfth grade to .6104 at the eighth grade.

SAT percentile scores were the next most influential variable for grade 9, 10, and 12 students. Self-perceived intelligence was second for grade 8 students. Days present 1982 was second for grade 11 students. Days present was statistically significant at the .05 level for grade 8, 10, 11 and 12 students. Only in grade 10 was ethnic group of significant statistical influence.

CHAPTER IV
SUMMARY, CONCLUSIONS, AND DISCUSSION

Summary

The problem of the study was to determine for students in each grade level, grades 8 through 12, in a single urban school district the relative impact of part-time employment to their 1981-82 grade point average (GPA) after the contributions of sex, ethnic group, socioeconomic status, school attendance, GPA for previous school year (1980-81), self-perceptions of intelligence, extracurricular activity participation, and SAT overall percentile score were taken into account. Specifically, the following steps were taken:

1. A determination was made of the relationship between the independent variables of GPA 1980-81, sex, ethnic group, socioeconomic status, school attendance, self-perceptions of intelligence, extracurricular activity participation, and SAT percentile scores and the dependent variable GPA 1981-82.
2. After determination of the relationship of the above listed independent variables and the dependent variable, the independent dichotomous variable

of student part-time employment (yes or no-Model I) was introduced and its contribution to the relationship, if any, was determined.

3. After determination of the relationship of the independent variables listed in #1 to the dependent variable, except part-time employment, the extent of part-time employment (number of hours worked--Model II) was introduced in place of Model I and its contribution to the relationship, if any, was determined.

The study was confined to those students in a single urban school district for which complete usable data could be obtained. More specifically, complete usable data were obtained from 106 eighth grade students, 90 ninth grade students, 92 tenth grade students, 90 eleventh grade students, and 92 twelfth grade students for a total of 470 students. Data in regard to 1981-82 GPA, school attendance, sex, ethnic group, SAT scores, SES, and 1980-81 GPA were obtained from the Duval County School Board SIMS computer data base and student cumulative record files. All data were verified with the student permanent record files maintained at the school that the student was attending.

The data source for information pertaining to hours worked, extracurricular activity participation, self-perception of intelligence, and participation in free or reduced price lunch program was a researcher-designed student information questionnaire.

To determine the contribution of the several presumed independent variables to grades multiple regression analysis was used. The nature of the multiple regression was stepwise for all the variables except the employment variable. For each grade level two multiple regression equations were run, one using employed or not (yes or no-Model I), the other one employment status by category of hours worked (Model II).

The output of the analysis included means and standard deviations for each variable, correlation coefficients among the variables, the proportion of the variance accounted for by each of the entire models, the proportion accounted for by each variable in each of the models, and the standard error of estimate.

The major findings emerging from the data analysis were as follows:

1. In regard to the descriptive data collected from the students, it was found that the 1981-82 grade point average of students ranged throughout the entire scale of 0.0000 to 4.0000. The means were slightly above the theoretical average (2.0000) for all grades except grade 9 where it was slightly below the theoretical average with a mean of 1.9728. Days present ranged from a minimum 91 for grade 10 to a minimum of 147 days for grade 9 students. The maximum attendance of 180 days was achieved by all grade groups. The sample according

to sex varied from 60% female and 40% male for grade 11 students to 50% male and 50% female in grade 12. Participation in extracurricular activities was found to range from 70% participation in one or more activities in grade 9 to a low of 51% participation in one or more activities in grade 11. All ethnic groups were represented in the sample. Socioeconomic status (SES) was indicated by whether or not the student participated in the reduced price or free lunch program. This participation ranged from 11% in grade 11 to 28% in grade 9. The mean Stanford Achievement Test (SAT) overall percentile scores ranged from 46.5444 for grade 9 to 57.5000 for grade 12; only grade 9 students fell below the national norm. Self-perception of intelligence (SPIN) was scaled, 1 of below average intelligence, 2 of average intelligence, and 3 of above average intelligence. The grade level groups of students perceived themselves generally to be slightly above average intelligence. The 1980-81 grade point average ranged from 0.0000 to 4.0000. The range of grade group means was from 2.0511 for grade 10 to 2.4826 for grade 12. The proportion of students employed (Model I employment status) ranged from 21% in grade 9 to 64% in grade 12. In regard to the extent of employment (Model II employment status), it was found that 10% of grade 8 students worked 5-9 hours per week, 8% of grade 9 students worked 1-4 hours per week, 10% of grade 10 students worked 10-14 hours per week, 8% of grade 11 students worked 15-19 hours per week, 8% of grade 11 students worked 20-24 hours per week, and 20% of grade 12 students worked 15-19 hours per week. (These percentages were the largest by category for each grade level group.)

2. In regard to the correlations among the variables, it was found that the correlations for grade 8 students ranged from a negative correlation of -.3113 between ethnic group and SAT overall percentile scores, to a correlation of .7813 between 1980-81 grade point average (GPA-81) and 1981-82 grade point average (GPA-82). Correlations for grade 9 students ranged from a negative correlation of -.1825 between ethnic group and Model II employment status to a correlation of .7801 between GPA-81 and GPA-82. Grade 10 correlations ranged from a negative correlation of -.4856 between ethnic group and SAT percentile scores to a correlation of .7313 between GPA-81 and GPA-82. Grade 11 correlations ranged from a negative correlation of -.2198 between SES and SAT percentile scores to a correlation of .6553 between GPA-81 and GPA-82. Correlations for grade 12 ranged from a negative of -.4563 between ethnic group and SAT percentile

scores to a correlation of .6365 between GPA-81 and GPA-82. The correlations between employment status and 1981-82 grade point average were negative in value for all grades except grade 9, even though only in two instances were these significant at the .05 level.

3. In regard to the findings emerging from the multiple regression data, the predictive value of independent variables, less part-time employment, varied greatly. The 1980-81 grade point average (GPA-81) was significant at all grade levels accounting for from about 41% of the variance in grades at the twelfth grade to about 61% at eighth grade. SAT overall percentile score was the second most influential variable for grades 10 and 12 students. Self-perception of intelligence (SPIN) was the second most influential variable for grade 8 students. Days present during 1982 was the second most influential variable for grade 11 students and it was statistically significant at the .05 level for grade 8, 10, 11, and 12 students. Only in grade 10 was ethnic group of statistical significant influence. In regard to the predictive value of independent variables including Model I employment, only in grades 10 and 11 was part-time employment found to be statistically significant at the .05 level. Its contribution was negative and

was by far overshadowed by GPA-81, days present 1982, and SAT percentile scores. In regard to the predictive value of independent variables including Model II employment (categories of hours worked), only in grade 10 was it found to be statistically significant. Again, its contribution was negative and was by far overshadowed by GPA-81, SAT percentile scores, days present 1982, and SPIN.

4. In terms of the specific contributions of employment status to an increase in the percent of variance in the dependent variable (GPA-82), it was found that in grade 8 Model I employment contributed .0019% of a total of .6975% and Model II employment status contributed .0007% of a total of .6975%. In grade 9 Model I employment contributed .0001% of a total of .6319% and Model II employment status contributed .0006% of a total of .6324%. In grade 10 Model I employment contributed .0112% of a total of .6868%; Model II employment status contributed .0128% of a total of .6884%. In grade 11 Model I employment contributed .0221% of a total of .5253% and Model II employment status contributed .0133% of a total of .5165%. In grade 12 Model I employment contributed .0076% of a total of .5415% and Model II employment status contributed .0029% of a total of .5378%.

Conclusions

In regard to the basic focus of the investigation, the extent to which part-time employment has an impact on the grade point average of high school students, the conclusion is that the impact of part-time employment on the academic achievement of the studied students is minimal. This conclusion seems to be justified, because in only very few instances was part-time employment found to make a significant contribution to the variation in grade point average. More specifically, in grade 10 it was found that it made a significant contribution in the sense that the students that worked made poorer grades, but this contribution followed the contributions of GPA-1981, SAT percentile scores, days present 1982, SPIN, and ethnic group and contributed less than 2% to the approximately 69% of the variance in grades accounted for by all of the presumed independent variables combined. In grade 11 it was found that part-time employment made a contribution after the contributions of GPA-81, days present 1982, and SAT percentile scores were determined. The contribution was about 2% of the approximately 53% of the variance in 1981-82 grades accounted for by all of the presumed independent variables. In the other instances studied there was no significant impact either positively or negatively. Thus, the conclusion is reached that it has minimal impact.

Even though not central to the basic focus of the investigation, the other major conclusion is that the best predictors of students' grade point averages are previous grades, SAT percentile scores, and attendance. If one reviews the studies reported in Chapter II, it shows that in numerous studies, e.g., Gade and Peterson (1980), Hammond (1970), Bidwell and Kasarda (1980), Finn, Dulberg, and Reis (1979), Nuttall (1972), Rehberg, Schafer, and Sinclair (1970), Bailey and Bailey (1974), Kobett (1979), Schab (1979), Good (1973), and Yarworth and Gauthier (1978), the importance of these factors has been noted. Thus, this conclusion, which is peripheral to the central purpose of this investigation, reconfirms the previous studies which lead to the generalization that these variables impact most heavily on grade point averages.

Discussion

The reader will recall that a justification offered for the study was that there was a great deal of controversy about whether, as a policy matter, students should be encouraged to seek part-time employment during their secondary school years. Proponents of one view contended that grade point averages of teenage students in junior and senior high school who worked part-time were lower than those of similar students who did not work. That is, part-time work hindered academic achievement as measured by grade point average. Central to this point of view also was the opinion that students required to work while attending school were denied active involvement in school-related activities. Justification for this belief rested on reports which suggested that involvement in cocurricular activities enhanced essential social development and that the "values orientation" from such activities was lacking in students who worked while attending school. (Williams, 1967, p. 36; Young, 1980, D-3).

Advocates of the opposing view argued that part-time employment prepared students to become self-sufficient wage-earners in society′s work force. These educators held that students′ work experiences helped them raise their living standard and aided society by reducing unemployment and increasing the gross national product. A survey of employers revealed that 68% favored youth work experience. Resultant benefits included development of maturity, self-identity, self-reliance, career direction, work relationships, and work enjoyment. (Delaney, 1975, VI-14).

Family financial situations sometimes required students to work. Variables dictating the need to work have ranged from low family income to divorce, death of the family wage earner, or abandonment by one or both parents. In addition, students often worked to relieve peer pressure to participate in school-related activities that involved substantial financial commitments. Others sought employment as a convenient means to obtain luxury items. Student employment programs sponsored by government and private agencies to prevent the termination of education have had a further effect of encouraging students to work part-time during or after school hours (Delaney, 1975; Dykeman, 1979, p. 365; Heyneman, 1977; Levine, 1979).

If the major conclusion of this investigation is accepted as reasonable and valid, the implication for policy makers is that if the concern is with academic achievement there should be no policy discouraging students from working. If working is deemed necessary or desirable for other reasons, i.e., financial hardship, students might even be encouraged to seek a reasonable amount of part-time employment.

It is recognized that the conclusions of the investigation reported herein obviously must be regarded as suggestive, not conclusive, because only one urban school district was involved at only one point in time. However, since the sampling procedure ensured a random sample, one can feel fairly comfortable that the data were in fact applicable for that school district at that point in time. Furthermore, if the investigation was replicated and similar results were found, the implication for policymakers relative to the lack of clear linkage between part-time employment and grade point average would be strengthened.

Given the situation, when policy makers are faced with a decision of what to do about part-time employment, if action is taken to curb employment or strongly encourage employment, it has to be made on some other basis, other than impact in academic areas.

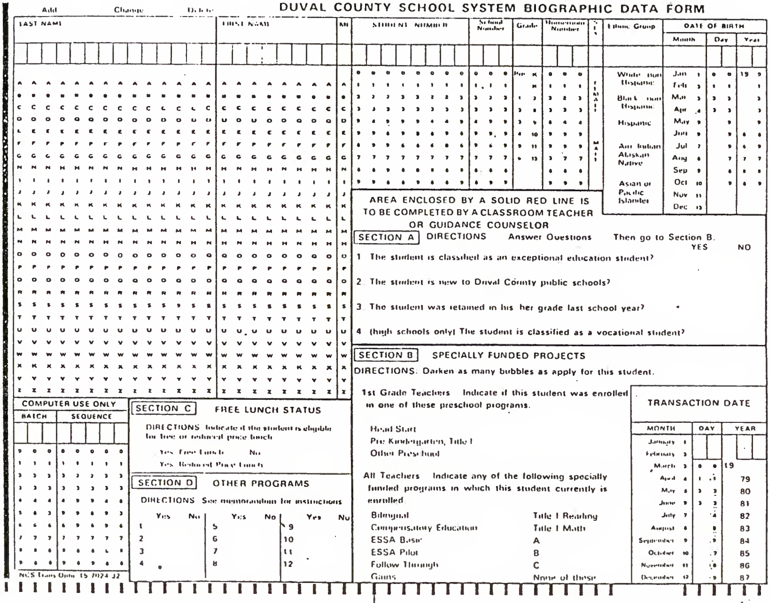
Another argument not germaine to the central focus of this study was, did part-time employment impact on the students participation in extracurricular activities? From a review of the data collected for study, it can be determined that the correlations between employment status and extracurricular activities participation for each of the grade levels were as follows:

Grade 8 Model I	.0419
Grade 8 Model II	.0340
Grade 9 Model I	.0416
Grade 9 Model II	- .0137
Grade 10 Model I	.1935
Grade 10 Model II	.1888
Grade 11 Model I	.0285
Grade 11 Model II	.0323
Grade 12 Model I	.0471
Grade 12 Model II	.0873

The range of correlations from -.0137 in grade 9 Model II to .1935 in grade 10 Model I does not show that part-time employment had a drastic impact on extracurricular activities. Also, the extracurricular activities variable was not found to make a statistically significant contribution to the dependent variable (GPA-82) at any grade level. Further inspection of the correlation matrices will yield similar relationships for the other variables that were not found among the variables classified as significant.

In summary, consistent with the view expressed by Nuttal (1972), Rehberg, Schafer, and Sinclair (1970), the argument that poor students are adversely affected academically because of simply being poor and having to work was not confirmed by these data. If a secondary student is employed part-time, the other contributions to grade point average such as, previous years grades, attendance, SAT percentile scores, and self-perception of intelligence will, percentile scores, and self-perception of intelligence will, according to the data of the study, far overshadow the impact of students working, or not working, part-time while attending secondary schools.

APPENDIX A
DUVAL COUNTY SCHOOL SYSTEM
BIOGRAPHIC DATA FORM



Add Change Delete

DUVAL COUNTY SCHOOL SYSTEM BIOGRAPHIC DATA FORM

LAST NAME | FIRST NAME | MI | STUDENT NUMBER | School Number | Grade | Homeroom Number | M/F | Ethnic Group | DATE OF BIRTH: Month, Day, Year

Ethnic Group:
- White non Hispanic
- Black non Hispanic
- Hispanic
- Am. Indian Alaskan Native
- Asian or Pacific Islander

Month: Jan 1, Feb 2, Mar 3, Apr 4, May 5, Jun 6, Jul 7, Aug 8, Sep 9, Oct 10, Nov 11, Dec 12

Grade: Pre K, K, 1–12

AREA ENCLOSED BY A SOLID RED LINE IS TO BE COMPLETED BY A CLASSROOM TEACHER OR GUIDANCE COUNSELOR

SECTION A DIRECTIONS Answer Questions Then go to Section B.

YES NO

1 The student is classified as an exceptional education student?

2 The student is new to Duval County public schools?

3 The student was retained in his her grade last school year?

4 (high schools only) The student is classified as a vocational student?

SECTION B SPECIALLY FUNDED PROJECTS

DIRECTIONS: Darken as many bubbles as apply for this student.

1st Grade Teachers Indicate if this student was enrolled in one of these preschool programs.

- Head Start
- Pre Kindergarten, Title I
- Other Preschool

All Teachers Indicate any of the following specially funded programs in which this student currently is enrolled.

Bilingual	Title I Reading
Compensatory Education	Title I Math
ESSA Basic	A
ESSA Pilot	B
Follow Through	C
Gains	None of these

TRANSACTION DATE

MONTH | DAY | YEAR

January 1, February 2, March 3, April 4, May 5, June 6, July 7, August 8, September 9, October 10, November 11, December 12

19 79, 80, 81, 82, 83, 84, 85, 86, 87

COMPUTER USE ONLY

BATCH SEQUENCE

SECTION C FREE LUNCH STATUS

DIRECTIONS Indicate if the student is eligible for free or reduced price lunch

Yes Free Lunch No

Yes Reduced Price Lunch

SECTION D OTHER PROGRAMS

DIRECTIONS See memorandum for instructions

	Yes	No		Yes	No		Yes	No
1			5			9		
2			6			10		
3			7			11		
4			8			12		

NCS Trans Optic 15 7024 32

APPENDIX B
STUDENT INFORMATION QUESTIONNAIRE
STUDENT PERCEPTIONS, ACTIVITIES, AND EMPLOYMENT

Name ______________________________ School ____________________
last first middle

Address (Number and St.) ______________________________

City ____________________ State ______________ Zipcode __________

Student Identification Number (if known) ____________________

Please answer the following questions by darkening in the appropriate bubble "Yes" or "No" after the question. Please read all the questions (both sides) before starting to answer the first one.

1. School year, 1981-82, I participated in at least one, or more, of the school activities of athletic teams, band, chorus, orchestra, or other school sponsored clubs: YES 0, NO 0.

2. In comparison to my fellow students, I think that my intelligence is: Below Average 0, Average 0, Above Average 0.

3. During the more than one-half of school year 1981-82, I held a part-time job: YES 0, NO 0.

4. During the more than one-half of school year 1980-81, I held a part-time job: YES 0, NO 0.

If your answers to questions Number Three and Four were "NO" that completes the information needed. Please turn in this sheet. If your answer to question Number Three or Four was "YES", please select an hours worked category that is closest to the amount of time you were usually employed each week for more than one-half of that year.

5. During the 1980-81, 1981-82 school years, I was paid for doing part-time work (including odd jobs, such as mowing lawns, or baby-sitting, and so forth) for about 1 to 4 hours per week:

1980-81 YES 0, NO 0. 1981-82 YES, NO 0.

	1980-81		1981-82	
6. I worked 5 to 9 hours per week:	YES 0	NO 0	YES 0	NO 0
7. I worked 10 to 14 hours per week:	YES 0	NO 0	YES 0	NO 0
8. I worked 15 to 19 hours per week:	YES 0	NO 0	YES 0	NO 0
9. I worked 20 to 24 hours per week:	YES 0	NO 0	YES 0	NO 0
10. I worked 25 to 29 hours per week:	YES 0	NO 0	YES 0	NO 0
11. I worked 30 to 34 hours per week:	YES 0	NO 0	YES 0	NO 0
12. I worked 35 or more hours per week:	YES 0	NO 0	YES 0	NO 0

Thank you for you help in performing this bit of educational research. Individual identified responses will not be released without your advance permission.

On free lunch/reduced lunch program. Yes ______ No______

APPENDIX C
STUDENT DATA NEEDED FOR LISTINGS OF SAMPLE DATA BASE

1. Name (last, first, initials).
2. Student Identification Number.
3. Sex (1) male (2) female.
4. Ethnic group: (1) White non-Hispanic, (2) Black non-Hispanic, (3) Hispanic, (4) American Indian or Alaskan Native (5) Asian or Pacific Islander.
5. Year grade level in school during 1981-82 ____________________.
6. School attended 1981-82 school year # ______________________.
7. School attended 1980-81 school year # ______________________.
8. School attended 1979-80 school year # ______________________.
9. Grade point average school year 1981-82 ____________________.
10. Grade point average school year 1980-81 ____________________.
11. Participation in extracurricular activities (yes/no).
12. Self-perception of intelligence: (1) below average, (2) average, (3) above average.
13. Number of hours worked per week for most of the school year sorted by categories: (1) none, (2) 1-4 hours per week, (3) 5-9 hours per week, (4) 10-14 hours per week, (5) 15-19 hours per week, (6) 20-24 hours per week, (7) 25-29 hours per week, (8) 30-34 hours per week, (9) 35 or more hours per week.
14. Student participation in any of the specially funded projects in Section B of SIMS Biographical Data Form, (yes/no).
15. The number of days present during 1981-82 ____________.

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BIOGRAPHICAL SKETCH

Walter G. Squires, Jr., an earth-space science and biology teacher at N. B. Forrest High School, Jacksonville, Florida, has taught science subjects for 5 years spanning a period of 30 years. Mr. Squires received his bachelor´s degree in psychology from the University of Florida in 1951, the Master of Education from the University of North Florida in 1976, and the Doctor of Education in 1983 from the University of Florida. He is a Commander in the United States Navy (retired). He was awarded U. S. Patent No. 3,035,285 for an explosively anchored navigational buoy. He was recognized in 1972, as one of the foremost authorities in the U. S. Navy in the field of mine warfare. Mr. Squires is the father of three children and has four grandchildren. He is a member of Kappa Delta Pi, the National Society for the Study of Education, the American Legion, National Sojourners, a 32` Mason, and is a disabled veteran.

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Education.

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Professor of Educational
Administration and Supervision

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Education.

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I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Education.

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This dissertation was submitted to the Graduate Faculty of the Department of Administration in the College of Education and to the Graduate Council, and was accepted as partial fulfillment of the requirements for the degree of Doctor of Education.

April, 1983

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